

**METHOD AND APPARATUS FOR TRANSMITTING SIGNALS IN A MULTI-  
ANTENNA MOBILE COMMUNICATIONS SYSTEM THAT COMPENSATES FOR  
CHANNEL VARIATIONS**

**Abstract**

- 5           A method is provided for transmitting signals from a transmitter comprising  
two or more antennas in a mobile telecommunications network. The method involves  
determining channel state information, estimating the reliability of that channel state  
information, and space time block encoding at least one data sequence. Before  
transmitting the data sequence, a linear transformation is applied to the data  
10   sequence so as to at least partially compensate for channel variations. The linear  
transformation is dependent upon the channel state information and upon the  
estimated reliability of the channel state information.